CLASSLESS INTERDOMAIN ROUTING USING BINARY CONTENT ADDRESSABLE MEMORY

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ABSTRACT

A method and apparatus for using a binary CAM array to implement Classless Interdomain Routing (CIDR) address processing. A binary CAM array is segmented into a plurality of array groups, each of which includes a number of rows of binary CAM cells and an associated group global mask. Each array group may be assigned to a particular prefix length by storing a prefix mask pattern corresponding to the prefix length in the array group's associated group global mask. CIDR address entries are then stored in array groups assigned to corresponding CIDR prefixes so that an array group assigned to a particular prefix stores only CIDR addresses having that prefix.